

State University of New York
Health Science Center at Syracuse

Committed to Excellence in • Professional Education • Patient Care • Research

Research Development Office

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March 10, 2000

Dr. Michael Meguid
Department of Surgery
Upstate Medical University

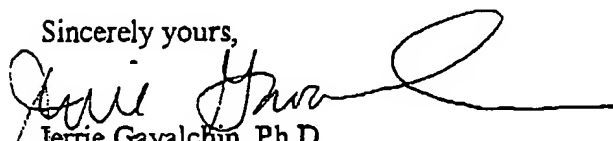
Dear Dr. Meguid:

I am pleased to report that your application for Bridge funding to the HSC Research Advisory Committee entitled, *A Rat Model for Surgical Nutrition Research*, has been approved. The committee felt very strongly that you were taking the right steps towards restoring extramural funding for your laboratory, and you should certainly be supported by the institution.

The committee funded the project in the amount of \$43,129, without the dismembrator or the pipettors, which they felt were not well justified. Two accounts will be established for you, one from the Research Enhancement Fund in the amount of \$8,970, for Dr. Chen's salary, and another, from the Hendrick's Fund, in the amount of \$34,159 for supplies and animal purchases and care. You should be receiving your account numbers shortly, and instructions as to how to access these funds.

Congratulations. Please let me know if you have any questions, or if I can be of any further assistance.

Sincerely yours,


Jerrie Gavalchin, Ph.D.
Associate Professor of Medicine
Chairman
SUNY UMU Research Advisory Committee

c.c John Lucas, Ph.D.

SUNY Health Science Center at Syracuse
Intramural Research Grant Application

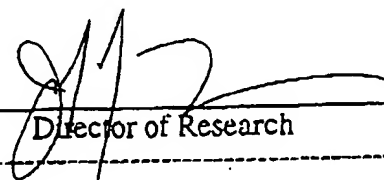
Principal Investigator: MICHAEL M. MEGUID MD, PhD.
Title & Department: Professor; Surgery & Neuroscience Program.
Title of Proposal: Rat Model For Surgical Nutrition Research.

Proposal reviewed by the Research Advisory Committee, State University of New York, Health Science Center at Syracuse (acting for the faculty of the College of Medicine):

Approved ☒ Disapproved []

Signature:  3/3/00
Research Advisory Committee Chair Date

Approved ☒ Disapproved []

Signature:  3/13/00
Director of Research Date

Approved ☒ Disapproved []

Signature:  3/18/00
President, Health Science Center Date

Action Board of Trustees, Syracuse University

Approved [] Disapproved []

Comments: _____

Signature:  Date 3/23/00

**SUNY Health Science Center at Syracuse
Application for Research Grant**

I. Principal Investigator: MICHAEL M. MEGUID MD. PhD

Title and Department: Professor, Surgery & Neuroscience Program

Amount Requested: \$ 50,000 for 12 mos. (1 yr. max.) starting February 2000

Title of Proposal: Rat Model for Surgical Nutrition Research

Signature: Michael Meguid MD PhD Jan 10th 2000
Principal Investigator Date

Signature: F. J. J. J. 1/26/00
Department Chair Date

II. Does this grant involve human subjects? Yes No X

If YES, is project approved? Yes X No or is approval pending? Yes X No

If project has been approved, attach copy of IRB approval letter to this form and sign certification below. If project is pending, you must submit IRB approval letter as soon as it is received.

I CERTIFY THAT THIS PROPOSAL DOES NOT DIFFER IN ITS INVOLVEMENT OF HUMAN SUBJECTS FROM THAT WHICH THE IRB HAS REVIEWED AND APPROVED.

1/24 / 2000
Date

Michael Meguid MD PhD
Signature of Principal Investigator

III. Does this grant involve live vertebrate animals? Yes X No CHUA 485

If YES, is project approved? Yes X No or is approval pending? Yes No

If project has been approved, attach copy of approval letter to this form. If approval is pending, you must submit approval letter as soon as it is received.

If live vertebrate animals are involved, this form must be signed by the Director of Laboratory Animal Medicine.

1/25/00
Date

[Signature]
Director of Laboratory Animal Medicine

IV. Does this grant involve recombinant DNA? Yes No X

Does this grant involve infectious agents that are potentially hazardous to humans or animals? (A list of such agents is available from the Institutional Biosafety Office) Yes No

If the answer to either of the above is YES, clearance must be obtained from the (IBC) Institutional Biosafety Committee, and a copy of the approval letter attached to this form.

ABSTRACT

Succinctly describe the proposed work. Highlight the scientific or clinical significance of the work, the background, and the experimental approaches to be employed. Use language understandable to a scientifically trained non-expert, avoid the use of jargon.

LIMIT TO ONE-HALF PAGE, SINGLE-SPACED.

Our long term objectives continue to be the elucidation of mechanisms underlying surgically significant food-intake abnormalities, through study of relevant animal models, including that of morbid obesity. This disorder afflicts about one third of the US population and its frequency is increasing; it is associated with increased incidences of cholelithiasis, muscular disease, and cancer, among other conditions; complicates their management and currently costs US health care an estimated \$40 billion per year. Surgery is the mainstay of treatment of morbid obesity, but its success rate is wanting the need to complement and augment surgical treatment is urgent and should be based on the understanding of hypothalamic neurotransmitter dysfunction. The genetically Obese Zucker rat is a relevant model of morbid obesity; meal size and meal number are larger and greater than in controls; food is eaten continuously without an apparent night/day cycle; Dopamine (DA) in the lateral hypothalamic area (LHA) correspond to the increased meal size, while that in the medial (VMN) is lower. Serotonin (5HT) is also expressed correspondingly.

Current evidence supports our concept that the morbid obesity of the obese Zucker rat is a chronic dysfunction of the primary hypothalamic monoamine neurotransmitter, DA and 5HT in the LHA and VMN, respectively as they impact on food intake stimulatory neuropeptides.

In this project, using the obese Zucker rat and its lean control, and based on the sum of past data and current ongoing studies, we propose to focus on studying the molecular basis of dopaminergic and serotonergic function in LHA and VMN in rats during hunger and satiety, by determining: i) the mRNA expression of rate-limiting enzymes for DA and 5-HT, tyrosine hydroxylase and tryptophan hydroxylase, respectively in LHA and VMN; ii) via in vivo 24-hour microdialysis, simultaneously measuring DA and 5HT in LHA and VMN; iii) monoamine receptor mRNA expression of DA 1,2 and 5HT 2C, 1A in LHA and VMN; iv) neurochemical co-receptor of DA and 5HT to food stimulatory neuropeptides (NPY, Galanin and Orexin) via in situ hybridization and immunohistochemistry; and v) to measure via RT-PCR changes in mRNA receptors of DA and 5HT in response to infusion of specific antagonists and their effect on food intake, meal size and meal number using the Automated Computerized Rat Eater Meter. The resultant information may provide a greatly increased number of sites where a therapeutically beneficial pharmacologic intervention in morbid obesity will be possible to complement and augment surgical management.

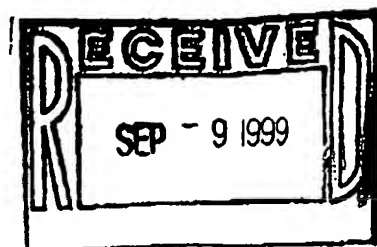
State University of New York
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Committee For The Humane
Use of Animals

August 31, 1999

Ref: CHUA #485



The following project has been approved for renewal by the Committee for the Humane Use of Animals:

Title of project: Implants of dopamine-rich neuronal cells into LHA of obese Zucker rats to induce anorexia: a paradigm of food intake control

Name of Principal Investigator: Michael Meguid, M.D.

Name of Institution: SUNY Health Science Center at Syracuse

Approval Period: August 31, 1999 to August 31, 2000

This institution has an Animal Welfare Assurance on file with the Office for the Protection of Research Risks. The Assurance Number is A3514-01.

David R. Mitchell PhD
Chairman, Committee
for the Humane Use of Animals

DRM/rcg

cc: David Temple
Grant Office

DETAILED BUDGET*

* Institutional/Deptal
Cost Sharing

1. Personnel: Names and titles	Time (%)	Salary	Fringe (31%)	TOTAL
Serguei Fetissov, MD, PhD	100	36,000	0	*
Chung Chen, PhD	15	8,970	0	8,970
TOTAL				\$8,970

2. Equipment	Cost	TOTAL
Fisher 550 Sonic Dismembrator	3,671	3,671
TOTAL	3,671	\$3,671

3. Supplies - By Category	Cost	TOTAL
Microdialysis supplies \$18,750	18,750	18,750
Immunological compounds & recombinant proteins	6,100	6,100
Expendables (slides, pipette tips, filters)	220	220
4 pipettors, single channel sets Gilson @ \$800 each	3,200	3,200
Chemical reagents	7,500	7,500
TOTAL	35,770	35,770

4. Animals/Animal Care:	Cost	TOTAL
20SD rats @ \$20 each	400	400
8 lean & 8 obese Zucker (@ \$15; @ \$40)	320	320
Per diem 320 weeks @ \$4/week	1,280	1,280
TOTAL	2,000	2,000
BUDGET TOTAL		\$50,411

*Note: Funds are NOT allowed for travel, secretarial assistance, office supplies, laundry charges, publication costs, library costs, or service contracts. Figure fringe benefits at 31 percent.

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